

PERSONAL DATA



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PUBLICATIONS SUMMARY

9

International Journal

11

International Proceedings

3

National Proceedings

Total Publications: 23

EDUCATION

Ph.D. Degree	Ph.D. (Computer Science), Southampton University, United Kingdom
Master Degree	M.Sc. (Computer Science), Prince of Songkla University, Thailand
Bachelor Degree	B.Sc. (Computer Science), Prince of Songkla University, Thailand

RESEARCH INTERESTS


Artificial Intelligence for Software Engineering



CASE Tool Development



Formal Methods and Engineering



Ontology Modelling and Engineering



Semantic Web Application



Software Engineering

RESEARCH PROJECTS

Ongoing Research Projects:

- การพัฒนาต้นแบบสำหรับแพลตฟอร์มการท่องเที่ยวเชิงการแพทย์และสุขภาพอัจฉริยะ
- การพัฒนาต้นแบบการตรวจอุบัติเหตุบนถนนในจังหวัดภูเก็ต
- แพลตฟอร์มปัญญาประดิษฐ์สำหรับการท่องเที่ยวเชิงประวัติศาสตร์ กรณีศึกษาเส้นทางข้ามคาบสมุทรจังหวัดระนองและชุมพร
- ระบบจำแนกข้อความทางประวัติศาสตร์ด้วยปัญญาประดิษฐ์ กรณีศึกษา ดินแดนสุวรรณภูมิ
- การใช้ปัญญาประดิษฐ์สำหรับการวิเคราะห์ข้อมูลข่าวจากสื่อสังคมออนไลน์

Previous Research Projects:

- **STATETest: An Automatic Test Case Generation Framework for State Transition Testing**
A. Intana, A. Sawedsuthiphan, "STATETest: An Automatic Test Case Generation Framework for State Transition Testing," 2023 20th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON), 2023.
- **An Automated Impact Analysis Framework of Test Cases Based on Changes of Use Case Based Requirement Specification with the Hybrid Testing Generation Approach of Equivalence Class Partitioning with Classification Tree Method**
A. Intana, K. Laosen, T.Sriraksa, "An Automated Impact Analysis Approach for Test Cases based on Changes of Use Case based Requirement Specifications," International Journal of Advanced Computer Science and Applications (IJACSA), vol. 14, no. 1, January, 2023.
- **A Framework of Context – Aware Recommender System for Sport Tourists**
W. Tanthavanich and A. Intana, "The Development of Running Event Ontology for Sport Tourism in Thailand," 2021 36th International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC), 2021, pp. 1-4, doi: 10.1109/ITC-CSCC52171.2021.9501410.
- **A Framework of Test Case Generation with Software Requirements Ontology**
S. Charoenreh and A. Intana, "Enhancing Software Testing with Ontology Engineering Approach," 2019 23rd International Computer Science and Engineering Conference (ICSEC), Phuket, Thailand, 2019, pp. 186-191, doi: 10.1109/ICSEC47112.2019.8974672.
- **SYNTTest (Syntax Test Case Generation) Tool**
A. Intana, M. Thongthep, P. Thepnimit, P. Saethapan and T. Monpipat, "SYNTTest: Prototype of Syntax Test Case Generation Tool," 2020 - 5th International Conference on Information Technology (InCIT), Chonburi, Thailand, 2020, pp. 259-264, doi: 10.1109/InCIT50588.2020.9310968.
- **FATCG (Fault Analysis based Test Case Generation)**
T. Sriraksa and A. Intana, "Adding Effectiveness to Combination of Equivalence Partitioning and Classification Tree Based Testing Technique with Fault Tree Analysis," 2017 - 21st International Computer Science and Engineering Conference, Bangkok, Thailand, 2017, pp. 348-353.
- **UCDev (Use Case Development) Tool**
A. Intana, P. Buranapraphan, J. Pitukdansakul and S. Vongna, "A Prototype of Use Case Development for Supporting Scenario Based Requirement Engineering." 2017 - 9th National Conference on Information Technology (NCIT), Bangkok, Thailand, 2017, pp. pp.269-274.
- **TestGen (Test Case Generation) Tool**
A. Intana, T. Sriraksa, S. Kaewyao, J. Phetrupan and K. Singsom "The Prototype Development of Automatic Test Case Generation for Supporting System and User Acceptance Testing," 2017 - 9th National Conference on Information Technology (NCIT), Bangkok, Thailand, 2017, pp. 246-252.

[Research Projects](#)

- 976-130 Computer and Internet Technology
- 977-271 Requirement Engineering and Software Modeling
- 977-371 Software Requirement Specification and Management
- 140-370 Software Engineering
- 977-374 Software Verification and Validation
- 976-502 Research Methodology in IT
- 969-051 Change Your Thoughts, Change Your Life
- 977-211 Software Engineering (International Program)
- 976-601 Research Methodology in Computing (International Program)
- 977-362 Software Verification and Validation (International Program)
- 977-378 Formal Methods in Software Engineering (International Program)

MSc/PhD STUDENTS

MSc Students



- Mr. Nitinun Manapattanachewin (2025-present)
- Mr. Phone Myint Zaw (2024-present)
- Mr. Wasupon Tanthavanich (2017-2023)
Thesis Title: *A Framework of Context – Aware Recommender System for Sport Tourists*
- Miss Suraiya Charoenreh (2017-2022)
Thesis Title: *A Framework of Test Case Generation with Software Requirements Ontology*
- Miss Thiwatip Sriraksa (2016-2018)
Thesis Title: *An Impact Analysis Framework of Test Cases Based on Changes of Use Case Based Requirement Specification with the Hybrid Testing Generation Approach of Equivalence Class Partitioning with Classification Tree Method*

INTERNATIONAL JOURNAL ARTICLES

A. Intana, K. Tantayakul, and P. Kaewnaka, "BlackBoxTestGen: An Automatic Black-Box Test Case Generation Framework," *Computers*, vol. 15, no. 5, p. 263, Apr. 2026. doi:

10.3390/computers15050263  <https://www.mdpi.com/2073-431X/15/5/263>


 4/2026  *Software Engineering, Software Testing*

K. Tantayakul, A. Intana, A. Aung, and R. Dhaou, "Seamless Inter-Domain Mobility with Hybrid SDN-LISP," *Future Internet*, vol. 18, no. 5, Art. no. 227, 2026, doi: 10.3390/fi18050227  4/2026  *Future Internet, Computer Network*

A. Intana, K. Tantayakul, W. Tanthavanich, and W. Chumchuay, "An Ontology-Driven Framework for Personalised Context-Aware Running Event Recommendations," *Computers*, vol. 15, no. 3, p. 195, 2026, doi:

10.3390/computers15030195  <https://www.mdpi.com/2073-431X/15/3/195>

 3/2026  *Tourism recommender system, Semantic Web Application, Ontology Engineering, Machine Learning*

A. Aung, K. Tantayakul, and A. Intana, "Location-Aware SDN-IDPS Framework for Real-Time DoS Mitigation in Vehicular Networks," *Future Internet*, vol. 18, no. 2, pp. 1-21, Feb. 2026.  <https://www.mdpi.com/1999-5903/18/2/87>

 2/2026  *Future Internet*

K. Tantayakul, W. Panichpattanukul, A. Intana, and P. Sornlertlamvanich, "Edge Caching Strategies for Seamless Handover in SDN-Enabled Connected Cars," *Future Internet*, vol. 17, no. 11, p. 525, Nov. 2025. doi:

10.3390/fi17110525  <https://www.mdpi.com/1999-5903/17/11/525>

K.Laosen, A. Intana, P.Chuaynukul, "Customer Needs Classification from Online Social Media using Bag-of-Concepts Representation", *International Journal on Advanced Science, Engineering and Information Technology (IJASEIT)*, vol. 13, no. 4, pp. 1546-1553, August, 2023.

8/2023 conceptual level analysis, bag of concepts, online social media, customer needs classification

A. Intana, K. Tantayakul, K. Laosen, S.Charoenreh, "An Approach of Test Case Generation with Software Requirement Ontology," *International Journal of Advanced Computer Science and Applications (IJACSA)*, vol. 14, no. 8, pp. 1005-1014, August, 2023.

8/2023 Software Testing, Software Requirement Specification, Ontology, Test Case, Combination of Equivalence and Classification Tree Method

A. Intana, K. Laosen, T.Sriraksa, "An Automated Impact Analysis Approach for Test Cases based on Changes of Use Case based Requirement Specifications," *International Journal of Advanced Computer Science and Applications (IJACSA)*, vol. 14, no. 1, pp. 967-980, January, 2023.

1/2023 Software Engineering, Change impact analysis approach, Test Case, Black-box Testing, Use Case Based Requirement Specification, Combination of Equivalence and Classification Tree Method

A. Intana, M. R. Poppleton, G. V. Merrett, "A formal co-simulation approach for wireless sensor network development". *Electronic Communications of the EASST*, vol. 70, pp.1-15, 2014.

<https://eprints.soton.ac.uk/369791/>

5/2014 Formal Modelling and Analysis, Formal Methods, Wireless Sensor Networks, Co-simulation

INTERNATIONAL PROCEEDINGS

T. San, V. Siddoo and A. Intana, "Design of a Support System Framework for Consultants in ISO/IEC 29110 Process Assessment," 2025 9th International Conference on Information Technology (InCIT), Phuket, Thailand, 2025, pp. 183-188, doi: 10.1109/InCIT66780.2025.11276083.

<https://ieeexplore.ieee.org/document/11276083>

11/2025 Software Engineering, Software Quality Assurance

A. Intana, K. Laosen, P. Nuanchan, N. Pattanakit and S. Dermchai, "An NLP-Based Approach for Detecting Ambiguity of Thai Software Requirements Specification," 2024 21st International Joint Conference on Computer Science and Software Engineering (JCSSE), Phuket, Thailand, 2024, pp. 99-106, doi: 10.1109/JCSSE61278.2024.10613719.

<https://ieeexplore.ieee.org/document/10613719/authors#authors>

6/2024 Software Engineering, Natural Language Processing, Software Requirement Specification

A. Intana and A. Sawedsuthiphan, "STATETest: An Automatic Test Case Generation Framework for State Transition Testing," in *Proc. The 20th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology 2023 (ECTI-CON2023)*, Nakhon Phanom, Thailand, 2023, pp. 1-4, doi: 10.1109/ECTI-CON58255.2023.10153308.

<https://ieeexplore.ieee.org/document/10153308/figures#figures>

6/2023 State Transition Testing, Black-box Testing, Test Cases, Test Case Generation, Automated Software Testing Tool

W. Tanthavanich and A. Intana, "The Development of Running Event Ontology for Sport Tourism in Thailand," in *Proc. The 36th International Technical Conference on Circuits/Systems, Computers and Communications 2021 (ITC-CSCC2021)*, 2021, pp. 1-4, doi: 10.1109/ITC-CSCC52171.2021.9501410.

<https://ieeexplore.ieee.org/document/9501410>

6/2021 Ontology, Sport Tourism, Sport Tourist, Running Events

A. Intana, "Teaching Requirement Engineering Using Industrial-Infused Project-Based Learning," in *Proc. The 5th International STEM Education Conference 2020 (iSTEM-Ed2020)*, Hua Hin, Thailand, 2020, pp. 82-85, doi: 10.1109/iSTEM-Ed50324.2020.9332770.

<https://ieeexplore.ieee.org/document/9332770>

11/2020 Requirement Engineering Education, Industrial-Infused Project-Based Learning, II-PrBL, Case-Based Learning, Industrial Problem-Based Learning

A. Intana, M. Thongthep, P. Thepnimit, P. Saethapan and T. Monpipat, "SYNTTest: Prototype of Syntax Test

Case Generation Tool," in *Proc. The 5th International Conference on Information Technology 2020 (InCIT2020)*, Chonburi, Thailand, 2020, pp. 259-264, doi: 10.1109/InCIT50588.2020.9310968.

🔗 <https://ieeexplore.ieee.org/document/9310968>

📅 10/2020 📌 Syntax Testing, Black-box Testing, Test Cases, Software Testing Tool, Regular Expression

A. Intana, "A Pattern-Based Formal Modelling Framework for Wireless Sensor Networks," in *Proc. The 17th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology 2020(ECTI-CON2020)*, Phuket, Thailand, 2020, pp. 63-66, doi: 10.1109/ECTI-CON49241.2020.9158327.

🔗 <https://ieeexplore.ieee.org/document/9158327>

📅 6/2020 📌 pattern-based formal modelling framework, wireless sensor networks, formal modelling patterns

A. Intana and T. Sriraksa, "Impact Analysis Framework of Test Cases Based on Changes of Use Case Based Requirements," in *Proc. The 23rd International Computer Science and Engineering Conference 2019 (ICSEC2019)*, Phuket, Thailand, 2019, pp. 230-235, doi: 10.1109/ICSEC47112.2019.8974699.

🔗 <https://ieeexplore.ieee.org/document/8974699>

📅 11/2019 📌 Test Cases, Impact Analysis, Equivalence Class Partitioning, Classification Tree Method, Black-box Testing

S. Charoenreh and A. Intana, "Enhancing Software Testing with Ontology Engineering Approach," In *Proc. The 23rd International Computer Science and Engineering Conference 2019 (ICSEC2019)*, Phuket, Thailand, 2019, pp. 186-191, doi: 10.1109/ICSEC47112.2019.8974672.

🔗 <https://ieeexplore.ieee.org/document/8974672>

📅 11/2019 📌 Test Cases, Requirement Ontology, Software Requirement Specification, Software Testing, Black-box Testing

A. Intana, M. R. Poppleton, and G. V. Merrett. "A model-based trace testing approach for validation of formal co-simulation models," In *Proc. The Symposium on Theory of Modeling & Simulation: DEVS Integrative M&S Symposium (DEVS '15)*. Society for Computer Simulation International, San Diego, CA, USA, 2015, pp.181-188.

🔗 <https://dl.acm.org/doi/abs/10.5555/2872965.2872990?download=true>

📅 4/2015 📌 Formal Methods, Co-simulation, wireless sensor networks, Software Testing, Software Verification and Validation, Simulation

A. Intana, M. R. Poppleton and G. V. Merrett, "Adding value to WSN simulation through formal modelling and analysis," 2013 4th International Workshop on Software Engineering for Sensor Network Applications (SESENA), San Francisco, CA, USA, 2013, pp. 24-29, doi: 10.1109/SESENA.2013.6612261.

🔗 <https://ieeexplore.ieee.org/document/6612261>

📅 5/2013 📌 Formal Methods, wireless sensor networks, Software Verification and Validation

NATIONAL PROCEEDINGS

T. Sriraksa and A. Intana, "Adding Effectiveness to Combination of Equivalence Partitioning and Classification Tree Based Testing Technique with Fault Tree Analysis," *2017 - 21st International Computer Science and Engineering Conference*, Bangkok, Thailand, 2017, pp. 348-353.

📅 11/2017 📌 Software Verification and Validation, Software Engineering

A. Intana, P. Buranapraphan, J. Pitukdansakul and S. Vongna, "A Prototype of Use Case Development for Supporting Scenario Based Requirement Engineering." *2017 - 9th National Conference on Information Technology (NCIT)*, Bangkok, Thailand, 2017, pp.269-274.

📅 9/2017 📌 Requirement Engineering, Software Engineering

A. Intana, T. Sriraksa, S. Kaewyao, J. Phetruapan and K. Singsom "The Prototype Development of Automatic Test Case Generation for Supporting System and User Acceptance Testing," *2017 - 9th National Conference on Information Technology (NCIT)*, Bangkok, Thailand, 2017, pp. 246-252.

📅 9/2017 📌 Software Verification and Validation, Software Engineering

AWARDS

Certificates:

- Data Scientist (Level 5), Thailand Professional Qualification Institute (Public Organization)

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COLLEGE OF COMPUTING

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